Instructions for Completing the Pretreatment Monitoring Data Spreadsheet

The Pretreatment Monitoring Data Spreadsheet should have been received with the influent, effluent, and sludge pollutants and goals already preloaded. If you have any questions about the spreadsheet or believe that the pollutants and or goals do not accurately reflect your pretreatment monitoring requirements, please call your EPA pretreatment contact. Note that the spreadsheet lists any pollutants for which a current goal has been established for any of the monitoring points, but does not list all of the priority pollutants. The current required monitoring frequency (number/year) from your NPDES permit is listed in the "Frequency" column. All available monitoring data, including where monitoring is conducted more frequently than required, should be entered for all listed pollutants with the exception of data for conventional/nonconventional pollutants (see below). Where more than one sample result is obtained for a given date at the same monitoring location (e.g., split samples), the results should be averaged and the average result entered in the spreadsheet (see guidance on averaging sample results below). Note that if you see a security warning indicating that content has been disabled you do not need to enable the content in order to use the spreadsheet. However, if the content is not enabled, the "Add a date" buttons discussed below will not work and any additional columns will need to be added manually. There are also three hidden worksheets that include some simple programming for EPA use in processing the spreadsheet after it is submitted. These worksheets include content that may be disabled but are not needed for entering data in the spreadsheet.

Monitoring Date – The monitoring date must be entered in the spreadsheet in month/day/year format. Where a monthly average is being reported for the influent data for conventional or nonconventional pollutants (see below), the monthly average result can be included in the same date column as other data collected during that month. For example, if the quarterly local limits testing was completed on March 15, the monthly average for BOD, TSS, etc. can be included in the March 15 monitoring column. If no other testing was done during a given month, use the last day of the month as the monitoring date (e.g., March 31).

Conventional/Nonconventional Pollutant Data – Conventional/nonconventional pollutants include pollutants such as BOD, CBOD, TSS, ammonia, TKN, total nitrogen, nitrate nitrogen, and phosphorus. For these pollutants, do not enter any effluent or sludge data. For influent data, if more than one sample result is obtained during a given month, report the monthly average of the sample results rather than each individual sample result. For other pollutants, including any toxic pollutants, enter each individual sample result.

Entering Data Reported as Non-Detectable – Data reported by the lab as non-detectable should be entered in the spreadsheet using a "<" sign and the detection level reported by the lab. Do not enter results as "ND" or any similar indicator. The result should be reported using the actual detection level and not half the detection level or any other similar method.

Averaging Data – The following guidance is provided for averaging data for reporting on the pretreatment monitoring data spreadsheet. Note that this guidance is applicable for this spreadsheet only.

- If there are multiple influent sample points, the results for each sample date should be averaged on a flow weighted basis and a single influent result reported on the spreadsheet. Where one or more of the results for the separate influent monitoring points is reported as non-detectable, use the detection level in the average rather than a surrogate such as half the detection level. The result for that pollutant on that date should then be reported as "<" the average.
- For two or more samples collected at the same sample point on the same date (e.g., split samples), the results should be averaged as follows:
  - Two or more results where all results are above the detection limit – average all results and report the average in the spreadsheet.
  - Two or more results where all results are below the detection limit – report the lowest of the non-detectable values as "<" the detection level reported by the lab. Do not report the result as half the detection limit. For example, if the two results that are obtained for the same date are "<0.1 mg/l" and "<0.001 mg/l", report "<0.001 mg/l" in the spreadsheet. Since "<0.001 mg/l" is less than "<0.1 mg/l" reporting "<0.001 mg/l" is consistent with both results.
  - Two or more results where one result is above the detection limit and one result is below the detection limit:
    - ✓ If the detectable result is below the detection limit for the non-detectable result, report the detectable result in the spreadsheet. Do not use half the detection level for this comparison. For example, if the two results that are obtained for the same date are "<0.1 mg/l" and "0.01 mg/l", report "0.01 mg/l" in the spreadsheet. Since "0.01 mg/l" is less than "<0.1 mg/l" reporting "0.01 mg/l" is consistent with both results.
    - ✓ If the detectable result is above the detection limit for the non-detectable result, report the average of the two results with a "<" in front of the result on the spreadsheet. Do not use half the detection in the average. For example, if the two results that are obtained for the same date are "0.1 mg/l" and "<0.05 mg/l", report "<0.075 mg/l" on the spreadsheet.

Influent Data - To enter influent data in the spreadsheet, open the spreadsheet and click on the influent tab at the bottom of the screen to access the influent data entry worksheet. All pollutants for which influent monitoring is required, other than the priority pollutant scan, should be listed in this tab along with space to enter up to 12 days of influent results. For the priority pollutant scan, include results for the listed pollutants, but other pollutants not listed in the worksheet should not be entered. Enter the influent monitoring date at the top of the column using the format "mm/dd/yyyy" (e.g., 12/23/2011) and enter the sample results for that date in the correct row for each pollutant. **Note that all monitoring data must be entered in mg/l.** Do not include the "mg/l" with the sample result. Non-detectable results must be entered as "<" the detection level (e.g., <0.001), and should not be entered as "ND" (or other similar indicator). At the end of the 12 influent results columns is a data flag shown as "DTfl". This data flag must not be deleted or edited because it is important in the data processing steps performed by EPA after receipt of the data. If more than 12 monitoring events are being reported, insert columns before the "DTfl" column or simply click on the "Add a date" button to the right of the data input columns. Note that the monitoring data cells include conditional formatting to highlight exceedances and manually adding columns may not copy this formatting (conditional formatting

may be manually copied). Using the "Add a date" button will add a column between columns "N" and "O", but will also copy any data from column "O" into the newly inserted column, so this feature works better if used before data entry. **For conventional/nonconventional pollutants such as BOD, TSS, ammonia (and other nitrogen pollutants such as total nitrogen and TKN), and phosphorus monthly average results should be reported rather than results for each individual sample date. For all other pollutants, please include all individual sample results.**

Effluent Data - To enter effluent data in the spreadsheet, click on the effluent tab to access the effluent data entry worksheet. All pollutants for which effluent monitoring is required should be listed in this tab along with space to enter up to 12 days of effluent results. **Note that the monitoring frequency for pollutants such as BOD, TSS, ammonia, and phosphorus is listed as "0" even where a local limit for these pollutants exists. This is because EPA is using the data reported on the DMRs to evaluate effluent discharges for these pollutants, and therefore data for these pollutants should not be entered in the spreadsheet.** Enter the effluent monitoring date at the top of the column and enter the sample results for that date in the correct row for each pollutant. **Note that all monitoring data must be entered in mg/l.** Do not include the "mg/l" with the sample result. Non-detectable results must be entered as "<" the detection level (e.g., <0.001), and should not be entered as "ND" (or other similar indicator). At the end of the 12 effluent results columns is a data flag shown as "DTfl". This data flag must not be deleted or edited because it is important in the data processing steps performed by EPA after receipt of the data. If more than 12 monitoring events are being reported, insert columns before the "DTfl" column or simply click on the "Add a date" button to the right of the data input columns. Note that the monitoring data cells include conditional formatting to highlight exceedances and manually adding columns may not copy this formatting (conditional formatting may be manually copied). Using the "Add a date" button will add a column between columns "N" and "O", but will also copy any data from column "O" into the newly inserted column, so this feature works better if used before data entry.

Sludge Data - To enter sludge data in the spreadsheet, click on the sludge tab to access the sludge data entry worksheet. All pollutants for which sludge monitoring is required, other than the priority pollutant scan, should be listed in this tab along with space to enter up to 12 days of sludge results. For the priority pollutant scan, include results for the listed pollutants, but other pollutants not listed in the worksheet should not be entered. **Note that the monitoring frequency for pollutants such as BOD, TSS, ammonia, and phosphorus is listed as "0" even where a local limit for these pollutants exists. This is because EPA is not tracking sludge levels for these pollutants, and therefore data for these pollutants should not be entered in the spreadsheet.** Enter the sludge monitoring date at the top of the column and enter the sample results for that date in the correct row for each pollutant. **Note that all monitoring data must be entered in mg/kg dry weight.** Do not include the "mg/kg" with the sample result. Non-detectable results must be entered as "<" the detection level (e.g., <0.1), and should not be entered as "ND" (or other similar indicator). At the end of the 12 sludge results columns is a data flag shown as "DTfl". This data flag must not be deleted or edited because it is important in the data processing steps performed by EPA after receipt of the data. If more than 12 monitoring events are being reported, insert columns before the "DTfl" column or simply click on the "Add a date" button to the right of the data input columns. Note that the monitoring data cells include

conditional formatting to highlight exceedances and manually adding columns may not copy this formatting (conditional formatting may be manually copied). Using the "Add a date" button will add a column between columns "N" and "O", but will also copy any data from column "O" into the newly inserted column, so this feature works better if used before data entry.

Other Spreadsheet Features – The spreadsheet includes formatting so that any individual sample result that exceeds the listed goal (including results reported as non-detectable but with a detection level above the goal) will be highlighted in **red bold**. In addition, after the last sample date for each pollutant on the spreadsheet is a counter that will count the number of sample results included in the spreadsheet for each pollutant for the sample location, and compare that number to the required monitoring frequency for that pollutant. If the number of results reported is less than the required monitoring frequency, the required monitoring frequency number will be highlighted in **red bold**. The total number of results entered for the outfall in the spreadsheet for all pollutants is listed at the top of the "Entry Count" column.

Saving and Submitting to EPA - After entry of the influent, effluent, and sludge data, save the spreadsheet. **If you are currently using Excel 2007 or a later version, please save the spreadsheet as an Excel 2003 spreadsheet. Saving the spreadsheet as an Excel 2007 or later version spreadsheet deactivates some of the features needed for EPA to process the spreadsheet.** Note that when saving the spreadsheet you may get a message such as "Minor loss of fidelity". If this happens, simply click continue to save the spreadsheet. Submit the spreadsheet either by email or on a cd or other electronic media to your EPA contact (see email addresses below). The contact person for each approved pretreatment program is listed in the annual report guidance that you should also receive. In addition, print the data from the influent, effluent, and sludge worksheets and include the printouts with your annual reports. At this time, EPA cannot accept the data solely in electronic form and therefore the printout of the data must be included in the annual report. **Don't forget to include the priority pollutant scan data in the paper copy of the annual report as well.** A copy of the lab reports for the priority pollutant scans is sufficient for purposes of the paper copy of the annual report.

Printing the Spreadsheet – The spreadsheet is currently formatted to print on 8½ X 11 paper in a landscaped orientation. All pollutants listed on the spreadsheet as well as all columns through the total count of monitoring results are included in the print area. The first two columns of the spreadsheet, including the pollutant name, will print on each page for easy review of the data. Where the number of pollutants is greater than the number that can fit on a single page the first four rows will print on each page, including the monitoring date. Where the "Add a date" button is used to insert columns or columns are inserted manually, the print area should be automatically extended to include the extra column(s). Using all twelve columns currently provided on the spreadsheet will likely result in the spreadsheet printing on two pages (double sided printing is encouraged). Unused columns may be deleted to reduce the number of pages printed, or the print area of the spreadsheet can be changed. If you need help with printing the spreadsheet, please email or call your EPA contact.

EPA Contacts

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Background - This spreadsheet was developed to assist EPA in reviewing the influent, effluent, and sludge data, to allow for more timely review of the annual reports and through the reduction in resources needed for annual report review and allow for more timely review of other pretreatment submissions such as local limits and legal authority modifications, and to allow EPA to be more responsive to other requests for assistance. The influent, effluent, and sludge goals, as well as the monitoring frequencies in each worksheet have been downloaded from EPA's Pretreatment Monitoring Database. This database is also used to evaluate whether any exceedances have occurred, so if the goals do not appear to be correct, please call your EPA pretreatment contact.

NPDES permits for POTWs with approved pretreatment programs include requirements for influent, effluent, and sludge monitoring at the treatment plant. In general, the permits require quarterly or more frequent monitoring for any pollutant for which a local limit has been adopted along with a priority pollutant scan on the influent and sludge. The influent, effluent, and sludge monitoring data are used by EPA to evaluate the effectiveness of the POTW pretreatment program. In addition, EPA has established influent, effluent, and sludge goals for each treatment plant based on the most recently accepted local limits evaluation for that treatment plant. The effluent and sludge goals represent the theoretical concentrations necessary to protect effluent and sludge quality, while the influent goal represents theoretical concentration necessary to achieve the effluent and sludge goals and protect the treatment plant.

The influent goal for each pollutant is calculated by converting the maximum allowable headworks loading from the most recently accepted local limits reevaluation to a concentration using the average POTW flow used in the local limits reevaluation. The effluent goal for each pollutant is calculated using the allowable headworks loading based on water quality, adjusting it to an allowable effluent loading using the removal rate assumed for that pollutant in the local limits reevaluation, and converting the resulting loading to a concentration using the average POTW flow from the limits reevaluation. The sludge goal is generally the EPA exceptional quality standard for land application except where the POTW is subject to a more stringent state standard or there is no exceptional quality standard for a pollutant and the POTW's chosen sludge disposal method includes a standard for that pollutant (e.g., beryllium for incineration). The sludge goal for molybdenum is based on the EPA ceiling concentration standards for land application since there is no exceptional quality standard for molybdenum. The current influent, effluent, and sludge goals are shown in each of the spreadsheets in the "Goals" column.

The "Frequency" column shows the number of monitoring events required for each pollutant during the calendar year. Submission of fewer than the indicated number of monitoring results for each pollutant will be shown in a "missing data" report in EPA's database. In general, where the frequency is listed as "4" (monitoring frequency of 4/year) or more, the POTW has adopted a local limit for that pollutant. Where the monitoring frequency is listed as "1" (monitoring frequency of 1/year), a goal exists for at least one of the influent, effluent, or sludge monitoring points and the pollutant is a priority pollutant but no local limit has been adopted. Where the

monitoring frequency is listed as "0" the pollutant was not included in the most recent local limits evaluation, no local limit exists and a priority pollutant scan is not required for that monitoring point (i.e., effluent), and/or the pollutant is not a priority pollutant. If you do not believe that the "Frequency" column correctly indicates your monitoring requirements, please call your EPA contact.